## Abstract of the Disclosure:

An integrated semiconductor circuit includes pad cells each having a connecting pad and an output driver. A transmission response of the pad cells is to be tested in a test mode. A signal transmitter is provided in order to produce periodic signal sequences. A periodic output signal from the signal transmitter is supplied as an input signal to an input of a pad cell to be tested. Through the use of an appropriate periodic signal at an output of the pad cell, the transmission response of the pad cell is tested in a frequency domain using a measurement method which employs a spectrum analyzer. This avoids complex measurements in the time domain, which have been carried out heretofore.

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LAG/tg